CLAIMS

What is claimed is:

1. A method comprising:

generating packets of content data to be broadcast from a content provider system via a network wherein the packets of content data include metadata describing the content data;

composing a playlist designating an order in which said packets of content are to be broadcast;

composing a transmission of said packets of content data based on said playlist;

executing said transmission of said packets of content data according to said playlist;

receiving said packets of content data at a receiver connected with said content provider system via said network; and

selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver.

2. The method of claim 1, wherein said generating packets of content data and said composing a playlist are performed by the content provider system.

3. The method of claim 1, wherein said composing a transmission and executing said transmission are performed by a broadcast system head-end.

4. The method of claim 1, wherein said metadata comprises Extensible Markup Language (XML) tags.

5. The method of claim 1, wherein said metadata comprises pre-show content discovery information.

6. The method of claim 1, wherein said metadata comprises real-time content discovery information.

7. The method of claim 1, wherein said generating packets of content data comprises:
gathering content to be broadcast from a content cache on the content provider system;
separating said content into packages and package elements within the packages;
assigning each package and package element a unique identifier;
storing said packages in a package cache;
assigning metadata tags identifying content within the packages and package elements to the packages and package elements; and
marking tagged packages as ready for inclusion in playlists.

8. The method of claim 7, wherein said composing a playlist comprises:
grouping all related packages into content groups;
encapsulating content groups into a playlist; and
passing the playlist to a transmission composition process.

9. The method of claim 8, further comprising concatenating two or more portions of metadata in the playlist prior to passing the playlist to a transmission composition process to generate metadata representing the entire playlist.

10. The method of claim 8, wherein said encapsulating content groups into a playlist further comprises encapsulating said content groups into a Motion Picture Experts Group-2 (MPEG-2) multiplex.

11. The method of claim 1, wherein said composing a transmission comprises:

selecting a playlist for scheduling;

defining playout policy parameters;

determining bandwidth required to transmit the playlist;

determining transmission policy parameters based on the bandwidth required to transmit the playlist and the playout policy parameters;

assigning network resources to the playlist based on the transmission policy;

caching the transmission as active and scheduled.

12. The method of claim 8, wherein said executing said transmission comprises:

reading a previously generated transmission;

loading transmission policy parameters;

encoding announcement data for each content package into an announcement data stream describing a schedule of content to be broadcast during execution of the transmission;

encoding metadata for each content package into a metadata stream providing a description of content within a content stream;

sending pre-show content discovery information describing a schedule of content to be broadcast during execution of the transmission; and

sending announcement, metadata and content data streams according to a predefined timeslot format.

13. The method of claim 12, wherein said receiving said packets of content data comprises:

reading the announcement data stream;

finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream;

decoding the metadata stream identified by the predetermined metadata URL;

correlating metadata from the decoded metadata stream to user profile information stored within the receiver;

preparing cache space adequate to store content that has metadata matching the user profile information; and

caching packages with metadata highly correlated with the filtering criteria.

14. A system comprising:

a content provider system to generate packets of content data to be broadcast from the content provider system via a first network connected with the content provider system wherein the packets of content data include metadata describing the content data and compose a playlist designating an order in which said packets of content are to be broadcast;

a broadcast system head-end connected with said content provider system via said first network to receive said packets of content data and said playlist, compose a transmission of said packets of content data based on said playlist, and execute said transmission of said packets of content data according to said playlist; and

a receiver connected with said broadcast system head-end via a second network to receive said packets of content data and selectively cache or present the packets based on a

comparison of the metadata describing the content data and user profile information stored on the receiver.

15. The system of claim of claim 14, wherein said content provider system:

gathers content to be broadcast from a content cache on the content provider system;

separates said content into packages and package elements within the packages;

assigns each package and package element a unique identifier;

stores said packages in a package cache;

assigns metadata tags identifying content within the packages and package elements to the packages and package elements; and

marks tagged packages as ready for inclusion in playlists.

16. The system of claim 15, wherein said content provider system:

groups all related packages into content groups;

encapsulates content groups into a playlist; and

passes the playlist to a transmission composition process.

17. The system of claim 16, content provider system further concatenates two or more portions of metadata in the playlist prior to passing the playlist to a transmission composition process to generate metadata representing the entire playlist.

18. The system of claim 14, wherein said broadcast system head-end:

selects a playlist for scheduling;

defines playout policy parameters;

determines bandwidth required to transmit the playlist;

determines transmission policy parameters based on the bandwidth required to transmit the playlist and the playout policy parameters;

assigns network resources to the playlist based on the transmission policy;

caching the transmission as active and scheduled.

19. The system of claim 15, wherein said broadcast system head-end:

reads a previously generated transmission;

loads transmission policy parameters;

encodes announcement data for each content package into an announcement data stream describing a schedule of content to be broadcast during execution of the transmission;

encodes metadata for each content package into a metadata stream providing a description of content within a content stream;

sends pre-show content discovery information describing a schedule of content to be broadcast during execution of the transmission; and

sends announcement, metadata and content data streams according to a predefined timeslot format.

20. The system of claim 19, wherein said receiver:

reads the announcement data stream;

finds a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream;

decodes the metadata stream identified by the predetermined metadata URL;

correlates metadata from the decoded metadata stream to user profile information stored within the receiver;

prepares cache space adequate to store content that has metadata matching the user profile information; and

caches packages with metadata highly correlated with the filtering criteria.

21. A machine-readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a processor, cause the processor to:

generate packets of content data to be broadcast from a content provider system via a network wherein the packets of content data include metadata describing the content data;

compose a playlist designating an order in which said packets of content are to be broadcast;

compose a transmission of said packets of content data based on said playlist;

execute said transmission of said packets of content data according to said playlist;

receive said packets of content data at a receiver connected with said content provider system via said network; and

selectively cache or present the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver.

22. The machine-readable medium of claim 21, wherein said generating packets of content data and said composing a playlist are performed by the content provider system.

23. The machine-readable medium of claim 21, wherein said composing a transmission and executing said transmission are performed by a broadcast system head-end.

24. The machine-readable medium of claim 21, wherein said metadata comprises Extensible Markup Language (XML) tags.

25. The machine-readable medium of claim 21, wherein said metadata comprises pre-show content discovery information.

26. The machine-readable medium of claim 21, wherein said metadata comprises real-time content discovery information.

27. The machine-readable medium of claim 21, wherein said generating packets of content data comprises:

gathering content to be broadcast from a content cache on the content provider system;

separating said content into packages and package elements within the packages;

assigning each package and package element a unique identifier;

storing said packages in a package cache;

assigning metadata tags identifying content within the packages and package elements to the packages and package elements; and

marking tagged packages as ready for inclusion in playlists.

28. The machine-readable medium of claim 27, wherein said composing a playlist comprises:

grouping all related packages into content groups;

encapsulating content groups into a playlist; and

passing the playlist to a transmission composition process.

29. The machine-readable medium of claim 28, further comprising concatenating two or more portions of metadata in the playlist prior to passing the playlist to a transmission composition process to generate metadata representing the entire playlist.

30. The machine-readable medium of claim 21, wherein said composing a transmission comprises:

selecting a playlist for scheduling;

defining playout policy parameters;

determining bandwidth required to transmit the playlist;

determining transmission policy parameters based on the bandwidth required to transmit the playlist and the playout policy parameters;

assigning network resources to the playlist based on the transmission policy;

caching the transmission as active and scheduled.

31. The machine-readable medium of claim 28, wherein said executing said transmission comprises:

reading a previously generated transmission;

loading transmission policy parameters;

encoding announcement data for each content package into an announcement data stream describing a schedule of content to be broadcast during execution of the transmission;

encoding metadata for each content package into a metadata stream providing a description of content within a content stream;

sending pre-show content discovery information describing a schedule of content to be broadcast during execution of the transmission; and

sending announcement, metadata and content data streams according to a predefined timeslot format.

32. The machine-readable medium of claim 31, wherein said receiving said packets of content data comprises:

reading the announcement data stream;

finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream;

decoding a metadata stream identified by the predetermined metadata URL;

correlating metadata from the decoded metadata stream to user profile information stored within the receiver;

preparing cache space adequate to store content that has metadata matching the user profile information; and

caching packages with metadata highly correlated with the filtering criteria.